REMARKS

Claims 1-3, 5-9, 11-14, and 16-25 remain in the application for further prosecution.

Claim 25 has been allowed, and has been rewritten in independent form.

Claims 1, 2 and 11 have been amended to make formal corrections, and to remove the last line of claim 1.

Although both the cover page and page 7 of the Final Office Action state that claims 7-9 and 11-13 are allowed, these six claims are all included in the rejection on page 4 of the Office Action. The status of these claims was discussed on the telephone with Examiner Edmondson, who stated that claims 7-9 and 11-13 are rejected, not allowed.

Rejection of Claims 1-3, 5-6, 14 and 18-24 Under 35 U.S.C. § 102 Based on Telly 4,549,684

Claims 1-2, 5-6 and 22-23

Claims 2 and 5-6 are dependent on the independent claim 1, and claim 23 is dependent on the independent claim 22.

Independent claims 1 and 22 are directed to systems for providing power to more than one ultrasonic welding probe from a single power supply. Both the independent claims 1 and 22 also include the limitation of "at least one programmable logic component provided within said multiple probe controller for detecting the power status of said first ultrasonic welding probe and said second ultrasonic welding probe and further for generating a first ultrasonic welding probe status signal and a second ultrasonic welding probe status signal." As stated in the specification of the present application, the programmable logic component detects the power status of the various probes so as to allow "for the provisioning of ultrasound power from the ultrasonic generator 12 to one ultrasonic probe 18 at a time." P. 6, ll. 23-24. *See also* FIG. 2 and p. 8, ll. 11-20. Because it is important to know when the ultrasonic probe has completely powered down, the power status of the probes must be known.

U.S. Patent No. 4,549,684 ("Telly") does not disclose a programmable logic component for "detecting the power status of said first ultrasonic welding probe and said second ultrasonic welding probe and further for generating a first ultrasonic welding probe status signal and a second ultrasonic welding probe status signal." Telly is directed to utilizing a single radio frequency power generator to provide a different r.f. signal to each of a plurality of transducers.

The controller 44 of the Telly system operates by closing one of a plurality of relays 42a, in order to provide power to one of the horns. Col. 10, ll. 24-50. When one of the relays 42a is closed, the other relays 42b, 42c, 42d are opened, preventing the flow of power to the other relays. *Id.* Each horn is powered for a predetermined amount of time, after which the sequence is reversed and the other welding horns are sequentially energized. *Id.* at 50-55.

There is no mention of the power status signal required by applicant's claims 1 and 22, much less the use of such a signal to control the switching of power to different probes. Telly simply does not teach or disclose waiting for the horns to power down. Therefore, independent claims 1 and 22 and their dependent claims are clearly not anticipated by Telly.

The Final Office Action alleges that the "detecting" and "generating" clauses included in the definition of the "programmable logic component" in claims 1 and 22 cannot be relied upon by applicant to distinguish over Telly because those clauses are recitations "of the intended use of the claimed invention." However, the Federal Circuit has held to the contrary. For example, in *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999), the Federal Circuit held:

> A general purpose computer, or microprocessor, programmed to carry out an algorithm creates "a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." *In re Alappat*, 33 F.3d 1526, 1545, 31 U.S.P.Q.2d 1545, 1558 (Fed..Cir..1994) (en banc); *see In re Bernhart*, 417 F.2d 1395, 1399-1400, 163 U.S.P.Q. 611, 615-16 (C.C.P.A. 1969) ("[I]f a machine is programmed in a certain new and unobvious way, it is physically different from the machine without that program; its memory elements are differently arranged."). The instructions of the software program that carry out the algorithm electrically change the general purpose computer by creating electrical paths within the device. These electrical paths create a special purpose machine for carrying out the particular algorithm.

In *Apex, Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003), the Federal Circuit stated:

> the term "circuit" with an appropriate identifier such as "interface," "programming" and "logic," certainly identifies some structural meaning to one of ordinary skill in the art.

The Final Office Action implicitly acknowledges that the "detecting" and "generating" functions of the "programmable logic controller" defined by claims 1 and 22 are not disclosed by

Telly, but asserts that the Telly control system is "capable of performing the intended use" and, therefore, "meets the claim." It is respectfully submitted that this assertion is contrary to the well established Federal Circuit law discussed above, and thus reconsideration of the rejection of claims 1 and 22 is respectfully requested.

Claims 3 and 24

These two claims are both dependent on claim 1 and, therefore, are allowable for the same reasons discussed above in connection with claim 1.

In addition, claim 3 requires that the first ultrasonic welding probe status signal indicate "that said first ultrasonic welding probe has terminated operation," and claim 24 requires that the programmable logic component be adapted to provide power to the second ultrasonic welding probe "only when power to said first ultrasonic welding probe has been terminated and said first ultrasonic welding probe has proceeded through a ring-down period."

Telly does not disclose waiting until the powered ultrasonic welding probe has terminated operation or has proceeded through a ring-down period. Telly discloses energizing a subsequent horn simultaneously with the turning off of power to the powered horn. There is no disclosure of a ring-down period. Thus, Telly does not disclose powering a subsequent ultrasonic probe only after the powered probe has terminated operation or proceeded through a ring-down period, and claims 3 and 24 are allowable for this additional reason.

The Final Office Action implicitly acknowledges that the limitations quoted from claims 3 and 24 are not disclosed by Telly, but states that they are recitations of "intended use" and, in effect, are being ignored. For the reasons set forth above, it is respectfully submitted that well established Federal Circuit law requires that the quoted limitations in claims 3 and 24 be considered, and thus reconsideration of the rejection of claims 3 and 24 is respectfully requested.

Claims 14 and 18-21

Claims 18-21 are dependent on the independent claim 14.

Claim 14 is directed to a system for providing power from one ultrasonic welding power supply to a plurality of ultrasonic welding probes and requires a multiple probe controller that is adapted to supply power to an unpowered probe only when "said powered ultrasonic welding probe has proceeded through a ring-down period." As discussed above in connection with claim 24, Telly does not disclose waiting until the powered ultrasonic welding probe has proceeded through a ring-down period. Telly discloses sequentially energizing the multiple horns,

simultaneously turning off the power to one horn and turning on the power to the next horn, without waiting for a ring-down period. Because Telly does not disclose powering the subsequent probe only after the previously powered probe has proceeded through a ring-down period, claim 14 and its dependent claims 18-21 are believed to be allowable.

The Final Office Action does not address the "monitor" and "change" clauses included in the definition of the "controller" in claim 14. Nor does Telly contain any disclosure that meets these limitations of claim 14.

Thus, reconsideration of the rejection of claim 14, and its dependent claims 18-21, is respectfully requested.

Rejection of Claims 7-9, 11-13, 16 and 17 Under 35 U.S.C. § 103(a)
Based on Telly 4,549,684 and Peter 4,746,051

Claims 7-13

Claims 8-9 and 11-13 are dependent on independent claim 7. Claim 10 is canceled.

Independent claim 7 is directed to a method of providing power to more than one ultrasonic welding probe. The method includes "generating a first ultrasonic welding probe power status signal indicating the power status of said first ultrasonic welding probe and a second ultrasonic welding probe power status signal indicating the power status of said second ultrasonic welding probe," "monitoring said first ultrasonic welding probe power status signal," and "initiating the provision of power to said second ultrasonic welding probe when said first ultrasonic welding probe power status signal indicates that said first ultrasonic welding probe is no longer powered." Thus, claim 7 specifically requires that, when power is switched from a first probe to a second probe, power is not actually supplied to the second probe until the power status signal for the first probe "indicates that said first ultrasonic welding probe is no longer powered." The claim also specifically requires that the power status signal be generated "at an ultrasound voltage sense circuit." These requirements of claim 7 are not met by Telly, who does not disclose the generation of a power status signal, much less the use of such a signal to control when power is actually supplied to the second probe. Telly simply turns off the power to one probe and immediately switches the power to the second probe. In fact, the Office Action

acknowledges that "there is no disclosure of a voltage sensing circuit or clock" in Telly, and relies on Peter for this element of applicant's claim 7.

However, Peter is directed to a system for controlling ultrasonic welding and determining whether the weld is of sufficient quality. He utilizes a power generator to provide power to a single horn 48. FIG. 1 and col. 2, ll. 61-67. There is no disclosure of multiple horns or how power might be switched between two or more horns.

Thus, there is no disclosure in either Telly or Peter that suggests that the switching of power from one probe to another should be controlled by a power status signal, rather than by simply connecting power to a second probe simultaneously with the disconnection of power from the first probe. The Final Office Action alleges that it would have been obvious to use Peter's voltage sensing circuit to achieve such a result, but never points to any teaching in either Telly or Peter that would motivate or suggest the desirability of achieving that result. The only source of any such motivation or suggestion is the present applicant's disclosure, which cannot be properly used, because to do so is improper use of hindsight based on applicant's own disclosure.

It is well settled that there must be some motivation that would have led one of ordinary skill in the art to combine references or modify references to arrive at the claimed invention. *See, e.g., B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996); *Al-site Corp. v. VSI Int'l Inc*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999); *In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000). The Examiner must show reasons why a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453 (Fed. Cir. 1998). Moreover, **the showing must be clear and particular**. *See, e.g., In re Dembiczak*, 175 F.3d 994, 999-1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998). Broad conclusory statements, standing alone, are not "evidence" supportive of a *prima facie* showing. *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993). "The factual inquiry whether to combine references must be thorough and searching." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52 (Fed. Cir. 2001). It must be based on **objective evidence of record.** *In re Sang-Su Lee*, 277 F.3d 1338, 1345-46, 61 USPQ2d 1430, 1433-34

(Fed. Cir. 2002); *see also In re Thrift*, 298 F.3d 1357, 1364, 63 USPQ2d 2002, 2006 (Fed. Cir. 2002). In *In re Sang-Su Lee, supra*, the Federal Circuit discussed how the PTO must perform a "thorough and searching" factual inquiry and not rely on the Examiner's "conclusory statements," emphasizing that "determination of patentability must be based on evidence." *In re Sang-Su Lee*, 277 F.3d at 1345-46, 61 USPQ2d at 1433-34.

In view of these clear and repeated admonishments from the Federal Circuit regarding the evidentiary requirements for setting forth a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the final rejection of claims 7-9 and 11-13, which does not even attempt to address the issue, clearly fails to establish a *prima facie* case of obviousness.

Any reliance on the Applicant's disclosure to support the rejection is improper. "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch,* 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (*see also In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (*stating* "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure."). *See also W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983).

Furthermore, in order to prove a *prima facie* case of obviousness, the combined references must disclose each and every limitation of the claim. Because Telly and Peter, either alone or in combination, fail to disclose the use of a power status signal to control the switching of power from one probe to another, claim 7 and its dependent claims are believed to be allowable.

Claims 16 and 17

Claims 16 and 17 are dependent on the independent claim 14 and, therefore, are allowable for the same reasons discussed above in connection with claim 14.

In addition, claim 16 requires that the "ring-down period corresponds to a ring-down status for said powered probe during which said powered probe is ceasing operation and said ring-down status is monitored by an ultrasound voltage sense circuit of said multiple probe controller," and claim 17 requires that the "multiple probe controller is provided with a clock for synchronizing ultrasonic probe control logic within said multiple probe controller." Neither Telly nor Peter does discloses any of these features. Peter is directed to a single horn and does

not provide any disclosure for how to switch power between multiple horns. Because neither Telly nor Peter, alone or in combination, disclose switching power only after a ring-down period has occurred, claims 16 and 17 are believed to be allowable. Reconsideration of the rejection of these claims is, therefore, respectfully requested.

Double Patenting

Claims 1-3, 5-9, 11-14, and 16-22 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over co-pending Application No. 11/214,660, either alone or in combination with Peter.

To overcome this rejection, a Terminal Disclaimer is submitted herewith. This Terminal Disclaimer should not be construed as an admission to the merits of the obviousness-type double-patenting rejections pursuant to Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870 (Fed. Cir. 1991).

Respectfully submitted,

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